

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

10/527279

PCT/EP2003/009571



Applicant's or agent's file reference 2002P14651WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/009571	International filing date (day/month/year) 28 August 2003 (28.08.2003)	Priority date (day/month/year) 10 September 2002 (10.09.2002)
International Patent Classification (IPC) or national classification and IPC F22B 1/18		
Applicant SIEMENS AKTIENGESELLSCHAFT		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 19 December 2003 (19.12.2003)	Date of completion of this report 29 December 2004 (29.12.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/009571

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☒ the description:
 pages 1-21, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the claims:
 pages 1-11, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the drawings:
 pages 1/5-5/5, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/EP 03/09571

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-11	YES
	Claims		NO
Inventive step (IS)	Claims	1-11	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO

2. Citations and explanations

Reference is made to the following documents:

- D1: EP-A-0 944 801 (SIEMENS AG) 29 September 1999
D2: DE 34 41 972 A (BELGORODSKIJ Z ENERGET MASH;
PROISVODSTVENNOE OB PROEKT NAL (SU)) 28 May 1986
D3: EP-A-0 450 072 (MIURA KOGYO KK) 9 October 1991
D4: US-A-5 353 749 (FUHRMAN JR TH C ET AL)
11 October 1994

Independent claim 1:

The present application meets the PCT requirements for novelty and inventive step because the subject matter of claim 1 satisfies PCT Article 33(2) and (3).

Document D1, which is regarded as the closest prior art, discloses a steam generator with different flow rates for the fluid flowing through each of the different steam generator pipes, as per the preamble of claim 1, from which the subject matter of claim 1 differs by virtue of the features in the characterising part of the claim.

The present invention can be considered to address the problem of devising a steam generator that has a simple distribution system and can therefore be produced with comparatively little outlay in terms of structure and design, steam of approximately the same temperature and the same quality being fed at the same time to the discharge collector from the different steam generator pipes.

All of documents D2 to D4 disclose steam generators with a discharge collector downstream of the steam generator pipes and the longitudinal axis of which is parallel to the direction in which the heating gas flows. As a result the outlay in terms of structure and design when producing the steam generator is kept low. It is possible to reduce the number of component types used by saving on the distribution system downstream of the continuous heating surfaces. However, said documents do not disclose homogeneous steam conditions in the discharge collectors. A person skilled in the art also would not apply the teachings of documents D2 to D4 to the steam generator as described in document D1. Document D1 discloses a steam generator structure in which homogeneous steam conditions in the discharge collector are striven for. This would no longer be the case if the discharge collector were aligned parallel to the direction of the heating gas. In that case, not only different local heating would have to be balanced, but the steam generator pipes would have to be heated to differing degrees along the entire length of the discharge collector. For these reasons, a person skilled in the art would not combine document D1 with documents D2 to D4.

Dependent claims 2 to 11:

Claims 2 to 11 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.

Additional observations:

Contrary to PCT Rule 5.1(a)(ii), the description does not cite document D2 or indicate the relevant prior art disclosed therein.